



Every year on Groundhog Day, February 2, people in the United States and Canada hold events where they look for woodchucks, also called groundhogs, to come out of their underground dens and forecast the beginning of spring. If these furry critters stand up on their hind legs and cast a shadow on sunlit ground, we imagine they go back into their dens to sleep for another six weeks of winter. If

Born to DIG

Woodchucks, also known as groundhogs, are chubby mammals that live much of their lives underground.

the day is cloudy and shadowless, we say it's a sign of spring.

On Groundhog Day in Minnesota, you won't see any woodchucks popping out of the ground. They are still in a deep sleep, tucked in their dens below the frost line. In our state's woods and towns, they hibernate from fall until spring. In March they'll be waking up and moving about. Let's learn more about these wild mammals living mostly underground.

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Minnesota's Marmots

Woodchucks by any other name are *Marmota monax*, a species in the mammal order Rodentia (rodents) in the family Sciuridae (squirrels) and the genus *Marmota* (marmots). From Alaska to Alabama, these big ground squirrels are the country's most common marmots. A woodchuck may weigh up to 15 pounds and measure two feet long from its nose to the tip of its short, bushy tail.

Three subspecies of *Marmota monax* live in Minnesota:

- The Canada woodchuck (*Marmota monax canadensis*) lives near the northern border.
- The rufescent woodchuck (*Marmota monax rufescens*) has red-tinged fur and lives in the north-central part of the state.
- In the south, look for the southern woodchuck (*Marmota monax monax*).

Making a Home

If you find a hole in the ground surrounded by a mound of earth and rocks, you might be looking at the “porch” and front entrance to a woodchuck's home burrow. If you spot a hole without soil around it, you might be looking at a woodchuck's back door. The woodchuck digs secret holes to escape if it's chased by a fox, a coyote, or other predators. If it's too far from a hole when threatened, this ground squirrel can climb a tree.

A woodchuck is built to dig. It has a muscular body with bristly brown fur, powerful short legs, and leathery black paws. Each sturdy paw has long claws on four fingers and a wide, flat thumbnail. The two front feet loosen soil and the hind feet kick it back. A woodchuck can use its chest and front legs like a bulldozer to push soil out of its burrow. Then, using its head like a shovel, the woodchuck moves the mound away from the entrance.

In addition to a home burrow, woodchucks often use a separate burrow for winter hibernation. A woodchuck digs this *hibernaculum*, or finds an empty one to use, in another part of its territory.

What might be a good spot for a young woodchuck to dig a burrow? A slope with sandy soil is a good choice because it can drain water away and is easy to dig. Or how about making a home near a field or a garden with tasty vegetables and flowering

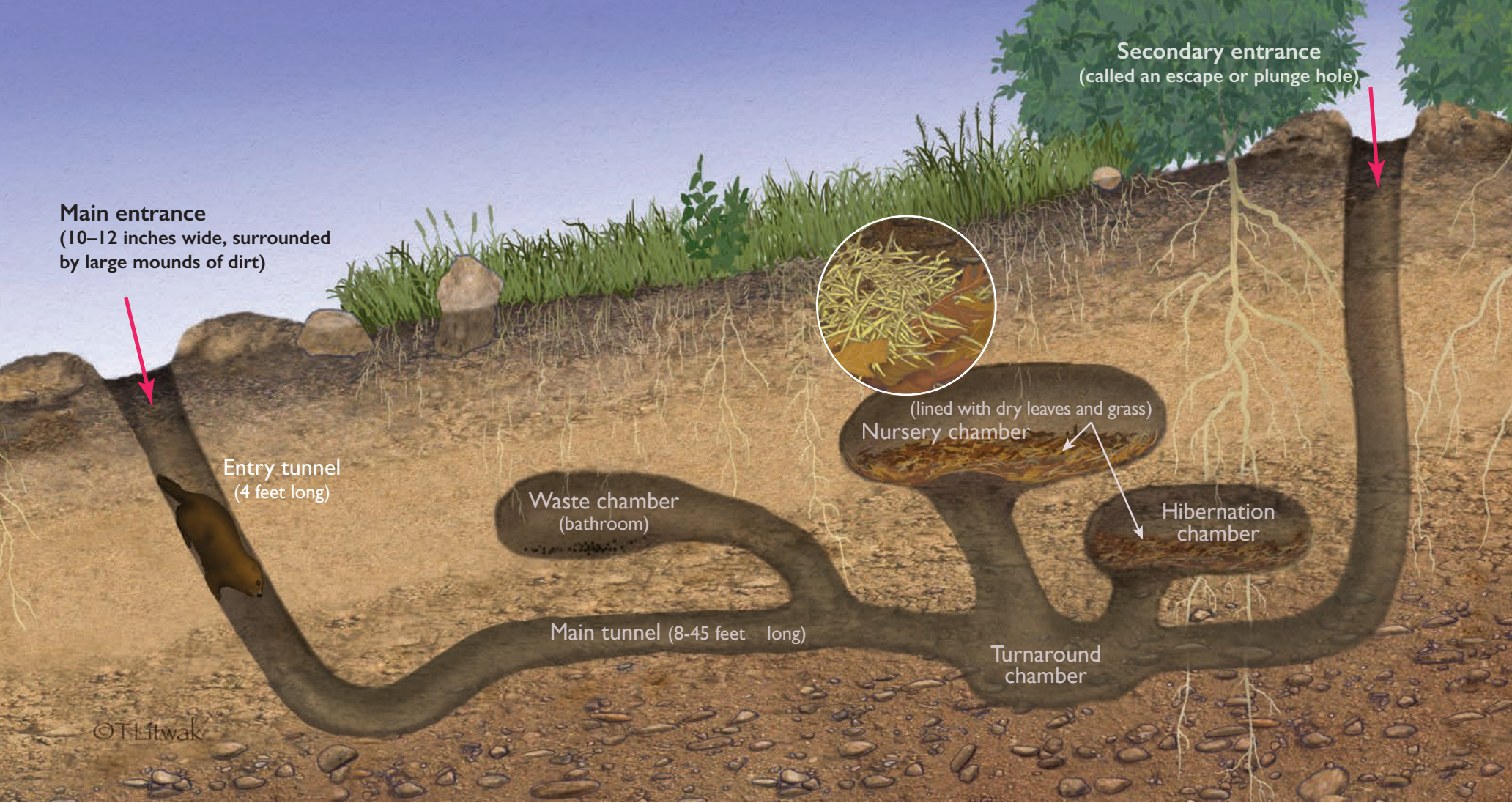
BILL MARCHEL



Woodchucks are natural tunnelers that live in burrows.

plants? A burrow in the woods helps shelter the woodchuck from cold winter weather. In summer, trees and bushes are above-ground places to hide from predators.

Being near a tree stump gives a woodchuck wood to gnaw. Like beavers and other rodents, a woodchuck has chisel-like front teeth (*incisors*) that never stop growing. Woodchucks chew a lot to keep their teeth clean and filed down. Unlike beavers, though, woodchucks don't chew down trees and haul wood to build their homes.



Building Plan

As subterranean architects, woodchucks follow the same basic blueprint for their home burrows. From the front-door hole, the entry tunnel slants down for about 4 feet, then curves up a little and goes sideways into a long, narrow tunnel. This main tunnel is at least 8 feet long. Ambitious dig-

gers make a tunnel 40 feet or longer.

Digging upward from the central tunnel, the woodchuck creates three or four passages that lead to circular chambers, or dens. The woodchuck wisely makes its dens higher than the bottom of the entry tunnel. In case of rain or melting snow pouring into

the top entrance, the woodchuck will stay dry and safe. Though a woodchuck can swim, it doesn't want its den to be flooded.

The woodchuck uses its home as a safe place to rest, sleep, raise young ones, and *defecate* (poop). If the burrow is deep enough to prevent freezing, one den may be used for winter hibernation. Another den becomes the nursery, where the female woodchuck

makes a nest of dry leaves and grass for her babies. Yet another becomes the bathroom.

Neither you nor predators are likely to find woodchuck droppings aboveground. If poop piles up and fills the underground room, the tidy woodchuck seals off the doorway with fresh soil or hauls the droppings outside and buries them. Then it digs a clean bathroom.



STAN TEKIELA

Fall Through Winter

In fall, nights become longer, and days shorter. Woodchucks have spent all summer eating to get ready for winter. As *herbivores*—animals that eat only plants—they munched dandelions, clover, alfalfa, and other green plants. They also ate flowers, fruits, and vegetables. A woodchuck doesn't bring food into its burrow, but instead stores winter nourishment as body fat. To survive months without eating, the animal

becomes roly-poly and then slows down to stop burning so much food energy.

When it's chubby enough, a woodchuck snuggles into its hibernaculum. As it curls up for a long winter rest (above), its normal body temperature drops from about 90 degrees to 40 degrees. In this motionless rest called *torpor*, its heart slows from 100 beats per minute to only five, and it takes about two breaths a minute.



STAN TEKIELA

Spring Wakeup

The urge to mate and start a family is one reason for woodchucks to wake up in spring. The male woodchuck comes out of his den sometime in March to look around at his neighborhood. His patch of lawn or field overlaps the territory of one or two female woodchucks. He stops by their burrows to see if they might be ready to mate.

As you may guess, when woodchucks emerge from hibernation, they have lost a lot of weight. If snow is still on the ground and spring greens are scarce, they rely on their body fat for energy. A very hungry—ravenous—woodchuck might search for *grubs* (beetle larvae) and other insects to eat.



Raising a Family

Come spring, woodchucks are ready to raise a family. One month after mating, the female gives birth to baby woodchucks. A litter of three, four, five, or six is usually born in April or May. Blind and hairless with tiny whiskers, a 4-inch-long newborn woodchuck weighs only 1 ounce—about as much as a pencil.

Nestled in the nursery, the newborns grow quickly as they nurse on their mom's milk. A 1-week-old woodchuck has soft hair and weighs 2 ounces. By 4 weeks, the furry *pup*—also called a *kit* or a *chuckling*—has opened its eyes. At 6 weeks, the

pup is 10 inches long and weighs 8 ounces—as much as a cup of water. The frisky pups follow mom around.

Up and Out

When mom woodchuck decides to go aboveground, she first pokes her head up from a burrow hole. Because her eyes, ears, and nose are close to the crown of her flat head, she can easily look, listen, and sniff for danger. If she senses a threat, such as a hawk or a dog, mom whistles in alarm and plunges back down. Her shrill whistle is a warning.

Young woodchucks, or pups, stick close to their mom and their home burrow.

When the pups are 4 to 6 weeks of age, they venture out of their burrow. Imagine being a pup on top of earth for the first time. Dazzled by sunlight and green grass, pups stick close to home. They nibble dandelions, clover, and berry leaves. They learn to listen for mom's warning whistle to dive into a hole for safety.

No longer nursing on their mom's milk, pups grow fat on plants. A little woodchuck must double its weight in just a few months, because it will need to survive all winter without eating. Imagine you had to eat enough veggies in one summer to weigh twice as much by fall.



BILL MARCHEL

Unwelcome WOODCHUCKS

The feeding habits of woodchucks can get them into trouble with farmers and gardeners. Especially in late summer as vegetables in fields and gardens ripen, woodchucks may trample and uproot crops as they help themselves to a meal. Some farmers worry that a cow could stumble on a woodchuck hole and get hurt.

Wildlife experts advise people on how to protect their plants or get the woodchuck to go somewhere else. For example, some gardeners bury a wire fence around their garden and leave the aboveground fence floppy so a woodchuck cannot easily dig under or climb over it.



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Summer Day

Shortly after sunrise, a woodchuck scrambles out of its burrow for breakfast. Like rabbits, it eats early while morning dew still covers clover and other green plants. Dew quenches thirst. A woodchuck rarely drinks water from a puddle.

When a woodchuck is aboveground, it usually stays close to an escape hole but will travel up to a half-mile from home while looking for veggies to eat. An adult wood-

chuck eats 1 to 1½ pounds of plants in a day, mostly at breakfast. After a hearty meal, a woodchuck returns to its burrow for a nap.

During summer, woodchucks are usually most active early and late in the day when it's cooler. Midday, you might see a woodchuck eating while sunbathing on a rock or tree stump. You might also spot one perked up like its prairie dog cousin while looking around for predators.



SPARKY STENSAS

Slowing Down Again

In fall, woodchucks stop gobbling up plants. After a busy summer, they become drowsy. Soon they will retreat to their dens for winter.


Pups move out of mom's burrow, and most of them find a burrow nearby to hibernate. Come spring, young woodchucks usually dig home burrows in new territories. Sometimes, mom will let pups stay in her territory. At age 2, young females can mate and raise their own families.

Not all woodchucks will survive winter, and not all of them live through summer. A hawk may snatch a wandering pup. By age 4, a woodchuck is old and cannot run or climb as fast as it could when it was younger. It may not be able

to escape when chased by a fox or a bobcat. An adult woodchuck usually lives to be 3 to 6 years old in the wild.

If a woodchuck dies or moves out of its burrow, another one may move in. Abandoned burrows also make homes for rabbits, snakes, foxes, and other critters who need a den.

Woodchuck Watch

Woodchucks have adapted well to living near people. They turn up in city parks, gardens, and golf courses. They might even live in your neighborhood. Because a woodchuck spends most of its time underground and can quickly escape into its burrow, you will be lucky to see a woodchuck. 

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